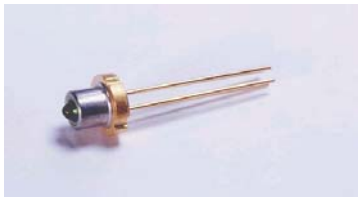
EP1310-FP-T Series

1310nm Fabry Perot Lasers - TO Can



FEATURES

- 1310nm emission wavelength
- InAlGaAs composition for reliable uncooled operation
- Operating Temperature Range -40 °C to +85 °C
- Low Threshold Current
- High Bandwidth - up to 2.5Gbps

APPLICATIONS

- High Speed Access Optical Links
- High Speed Datacoms
- FTTX
- PON
- Digital Transport Links (SDH/SONET)

ELECTRO-OPTICAL CHARACTERISTICS (T_{op} = 25°C unless stated otherwise):

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Threshold Current	I_{th}		6.5	10	mA	CW
Output Power	P_O	5			mW	CW, I = I_{op}
Operating Current						
Flat Window	I_{op}		18	23	mA	CW, P_O = 5mW
Ball Lens	I_{op}		20	25	mA	CW, P_O = 5mW
Aspherical Lens	I_{op}		19	24	mA	CW, P_O = 5mW
Peak Wavelength	λ	1290	1310	1330	nm	CW, P_O = 5mW
Wavelength Temperature coefficient			0.5		nm / °C	-40°C < T_{op} < 85°C
Quantum Efficiency						
Flat Window	η	0.33	0.43		mW/mA	CW, P_O = 1 to 5mW
Ball Lens	η	0.28	0.37		mW/mA	CW, P_O = 1 to 5mW
Aspherical Lens	η	0.30	0.40		mW/mA	CW, P_O = 1 to 5mW
Forward Voltage	V_f		1.2	1.5	Volts	I = I_{op}
Output Power at Threshold				200	μW	
Beam Divergence $\perp$ (Flat Window)	$(\theta_\perp)$		32		degrees	CW, P_O = 5mW
Beam divergence // (Flat Window)	$(\theta_{//})$		23		degrees	CW, P_O = 5mW
Spectral Width RMS	$\Delta\lambda$			3	nm	I = I_{op}
Rise time/fall time						
155 Mbps version				700	ps	I = I_{op}
622 Mbps version				400	ps	I = I_{op}
1.25 Gbps version				250	ps	I = I_{op}
2.50 Gbps version				120	ps	I = I_{op}
Monitor output current		100		700	μA	I = I_{op}
Monitor PD terminal capacitance				20	pF	
Fiber Coupled Power						
Ball Lens	Pf	0.4			mW	CW, Ith+20mA, SM Fiber
Aspherical Lens	Pf	2.0			mW	CW, Ith+20mA, SM Fiber

Note: Unless otherwise stated measurements perfomed with a flat form window.

ABSOLUTE MAXIMUM RATINGS:

PARAMETER	CONDITION	MIN	MAX	UNIT
Forward Current (PD)			2	mA
Forward Current Transient (LD)	1 μs max		150	mA
Reverse Voltage (LD)			2	Volts
Reverse Voltage (PD)			15	Volts
Case Operating Temperature (T_{op})		T_{min}	T_{max}	
Q version		-40	85	°C
Storage Temperature		-40	85	°C

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PACKAGE:

The EP1310-FP-T product series is offered in a TO 56 package format - see package outline drawings below (Fig 1). The package pinout may be specified according to the options shown in Fig 2.

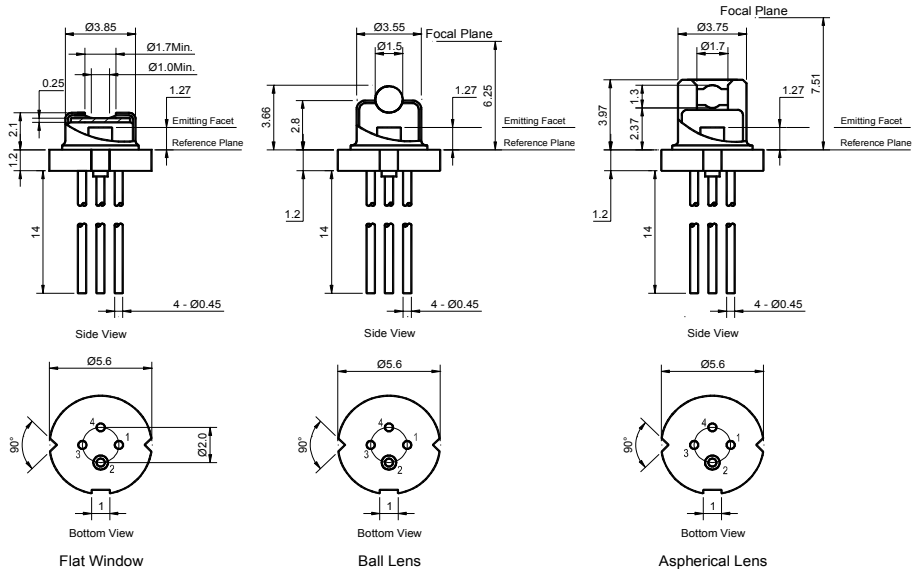

Fig. 1 - Package Outlines

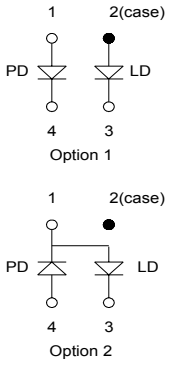

Fig. 2 - Pinout Options

HOW TO ORDER (example):

Please use the following example as a guide to building the appropriate part number for the device you require:

EP 1310 - FP - T - 157 - 561F - Q

- **EP** — Eblana Photonics
- **1310** — Wavelength Band
- **FP** — Fabry Perot
- **T** — TO Can package
- **157** — Data Rate
  - 157 = 15.5E7 (155Mbps)
  - 627 = 62.2E7 (622Mbps)
  - 128 = 12.5E8 (1.25Gbps)
  - 258 = 25.0E8 (2.50 Gbps)
- **561F** — Package Description
  - 56 = TO56 Can
  - 1 = Pinout option 1
  - 2 = Pinout option 2
  - F = Flat Window
  - B = 1.5 mm Ball Lens
  - A = Aspherical Lens
- **Q** — Performance Grade
  - Q version -40..85 °C

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